WHAT IS CLAIMED IS:

1. An engineered microparticle fabricated to be dielectrically-dispersive and adapted to produce a dielectric response to an applied electric field such that the microparticle is maneuverable by dielectrophoresis.

2. The microparticle of claim 1, comprising a dielectrically-dispersive core.

3. The microparticle of claim 2, comprising an insulating layer surrounding the core.

4. The microparticle of claim 3, wherein the insulating layer comprises a self-assembled monolayer.

5. The microparticle of claim 1, comprising streptavidin.

6. The microparticle of claim 5, comprising one or more biotinylated probes coupled to the streptavidin.

7. The microparticle of claim 1, comprising a dipolar material.

8. The microparticle of claim 1, comprising a doping agent.

9. The microparticle of claim 1, comprising a fluorescent label.

10. The microparticle of claim 1, comprising a ganglioside.

11. The microparticle of claim 1, comprising a vesicle.

12. The microparticle of claim 11, wherein the vesicle comprises an erythrocyte ghost.

13. A library of two or more engineered microparticles, each microparticle comprising a dielectrically-dispersive material differing to an extent sufficient to cause a discernible difference in a dielectric response of each microparticle to an applied electric field.

14. The library of claim 13, wherein the dielectrically-dispersive material comprises one or more layers of one or more materials.

15. The library of claim 13, wherein one or more of the engineered microparticles comprises a dielectrically-dispersive core.

16. The library of claim 13, wherein one or more of the engineered microparticles comprises a self-assembled monolayer.

17. The library of claim 13, wherein one or more of the engineered microparticles comprises streptavidin.

18. The library of claim 17, wherein one or more of the engineered microparticles comprises a biotinylated probe coupled to the streptavidin.

19. The library of claim 13, wherein one or more of the engineered microparticles comprises a fluorescent label.

20. The library of claim 13, wherein one or more of the engineered microparticles comprises a ganglioside.

21. The library of claim 13, wherein one or more of the engineered microparticles comprises a vesicle.

22. The library of claim 21, wherein the vesicle comprises an erythrocyte ghost.

23. The library of claim 21, wherein dielectrically-dispersive materials differ with respect to material encapsulated by two or more vesicles.

24. The library of claim 13, wherein dielectrically-dispersive materials differ with respect to chain length.

25. The library of claim 13, wherein dielectrically-dispersive materials differ with respect to a doping agent.

26. The library of claim 13, wherein dielectrically-dispersive materials differ with respect to methods of manufacture.

27. The library of claim 26, wherein dielectrically-dispersive materials differ with respect to heat treatments during manufacture.

28. The library of claim 13, wherein dielectrically-dispersive materials differ with respect to composition.

29. The library of claim 13, wherein dielectrically-dispersive materials differ with respect to surface charge.

30. The library of claim 13, wherein dielectrically-dispersive materials differ with respect to a side chain.

31. The library of claim 13, wherein dielectrically-dispersive materials differ with respect to mobility of charge carriers.

32. The library of claim 13, wherein dielectrically-dispersive materials differ with respect to viscosity.

33. A method for forming a library of two or more engineered microparticles, comprising:

obtaining a first dielectrically-dispersive material having a first dielectric property;

modifying the first dielectrically-dispersive material to form a second dielectrically-dispersive material having a second dielectric property;

wherein the second dielectric property differs from the first dielectric property to an extent sufficient to cause a discernible difference in a dielectric response to an applied electric field;

forming a first engineered microparticle using the first dielectrically-dispersive material; and

forming a second engineered microparticle using the second dielectrically-dispersive material.

34. The method of claim 33, wherein the first or second dielectrically-dispersive material comprises one or more layers of one or more materials.

35. The method of claim 33, wherein the first or second engineered microparticle comprises a dielectrically-dispersive core.

36. The method of claim 33, wherein the first or second engineered microparticle comprises a self-assembled monolayer.

37. The method of claim 33, wherein the first or second engineered microparticle comprises streptavidin.

38. The method of claim 37, wherein the first or second engineered microparticle comprises a biotinylated probe coupled to the streptavidin.

39. The method of claim 33, wherein the first or second engineered microparticle comprises a fluorescent label.

40. The method of claim 33, wherein the first or second engineered microparticle comprises a ganglioside.

41. The method of claim 33, wherein the first or second engineered microparticle comprises a vesicle.

42. The method of claim 41, wherein the vesicle comprises an erythrocyte ghost.

43. The method of claim 33, wherein modifying the first dielectrically-dispersive material comprises modifying an encapsulation material.

44. The method of claim 33, wherein modifying the first dielectrically-dispersive material comprises modifying a chain length.

45. The method of claim 33, wherein modifying the first dielectrically-dispersive material comprises modifying a doping agent.

46. The method of claim 33, wherein modifying the first dielectrically-dispersive material comprises modifying a method of manufacture.

47. The method of claim 46, wherein modifying the first dielectrically-dispersive material comprises modifying a heat treatments during manufacture.

48. The method of claim 33, wherein modifying the first dielectrically-dispersive material comprises modifying a composition.

49. The method of claim 33, wherein modifying the first dielectrically-dispersive material comprises modifying a surface charge.

50. The method of claim 33, wherein modifying the first dielectrically-dispersive material comprises modifying a side chain.

51. The method of claim 33, wherein modifying the first dielectrically-dispersive material comprises modifying a mobility of charge carriers.

52. The method of claim 33, wherein modifying the first dielectrically-dispersive material comprises modifying a viscosity.

53. An engineered microparticle comprising one or more gangliosides to affect microparticle aggregation.

54. The microparticle of claim 53, wherein the one or more gangliosides comprises a GM1 ganglioside.

55. The microparticle of claim 53, wherein the one or more gangliosides comprises a GD1a ganglioside

56. A method for controlling the aggregation of microparticles, comprising modulating the surface charge of one or more of the microparticles.

57. The method of claim 56, wherein modulating the surface charge comprises the addition of one or more gangliosides to the one or more microparticles.

58. The method of claim 57, wherein one or more of the gangliosides comprises a GM1 ganglioside.

59. The method of claim 57, wherein one or more of the gangliosides comprises a GD1a ganglioside.

60. A method for identifying one or more complexes within a sample, the method comprising:

admixing with the sample a plurality of engineered microparticles, each microparticle comprising streptavidin and having a different dielectric property;

associating the plurality of engineered microparticles with one or more target analytes comprising biotin to form one or more complexes; and

identifying the one or more complexes by distinguishing between the different dielectric properties.